



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,825	12/14/2004	Jin-Ho Son	0630-2153PUS1	8737
2292 7590 08/20/2008 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				
EXAMINER				
TAHA, SHAQ				
ART UNIT		PAPER NUMBER		
2146				
NOTIFICATION DATE		DELIVERY MODE		
08/20/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/517,825

Applicant(s)

SON ET AL.

Examiner

SHAQ TAHA

Art Unit

2146

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This is a non-final action for application number 10/517,825 based on after a request for continuation filed on 06/11/2008. The original application was filed on 12/14/2004. Claims 1 – 32 are currently pending and have been considered below. Claims 1 – 4, 6, 8, 9, and 12-20 are amended, Claims 20-32 are new. Claims 1, 12, 17, and 24 are independent claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 6, 8 - 16, 21, 22, 24, and 29 - 32 are rejected under 35 U.S.C.103(a) as being unpatentable over Zintel et al. (US 2002/0029256), in view of Knauerhase et al. (US 2004/0203718).

Regarding claims 1, 12, and 24, Zintel et al. teaches a synchronization method of an UPnP (universal plug and play)-based network system, the method comprising: **[FIGS. 1 and 2, UPnP is an application-level distributed network architecture where the logical nodes on the network are User Control Points 104-105, Controlled Devices 106-107 and Bridges 120, (Zintel et a., Paragraph 128, Page 7)],**

implementing at least one UPnP device controllable by using at least one of the CPs, **[Fig. 1, Ref # 107 and 106 wherein a controlled devices 106-107 are responsible for storing and updating the state of Services, (Zintel et al., Paragraph 130, Page 8)],**

at least one of the CPs being recognizable as a UPnP device in the UPnP-based network system, **[Nothing prevents a single device from implementing the functionality of a User Control Point, one or more Controlled Devices and a Bridge at the same time, wherein a CP being recognized as a UPnP device,(Zintel et al., Paragraph 63, Page 4)],**

wherein each of the at least two CPs is capable of independently and directly managing and/or adjusting the UPnP device, **[User Control Points are required to synchronize to the state on Controlled Devices and to share state directly among themselves, User Control Points typically have user interface that is used to access one or more Controlled Devices on the network, (Zintel et al., Paragraphs 130 & 131, Page 8)],**

Zintel et al. fails to teach performing a roaming function by including at least two CPs (control point),

Knauerhase et al. teaches a roaming device to facilitate the roaming device's acquiring connectivity, **(Knauerhase et al., Paragraph 1, Page 1)**, to determining and using network coverage maps, and more particularly to wireless devices providing their coverage data to facilitate determining a global coverage map that may be provided, **(Knauerhase et al., Paragraph 1, Page 1),**

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Zintel by performing a roaming function to facilitate the roaming device's acquiring connectivity, **(Knauerhase et al., Paragraph 1, Page 1)**, to determining and using network coverage maps, and more particularly to wireless devices providing their coverage data to facilitate determining a global coverage map that may be provided, **(Knauerhase et al., Paragraph 1, Page 1)**.

Regarding claims 8 and 30, wherein one of the CPs classifies whether a message is an advertisement message of the UPnP device or a roaming message according to role-switch of a CP by checking a roaming state in Device Description, **[When a device is added to the network, the UPnP discovery protocol allows that device to advertise its services to control points on the network, (Zintel et al., Paragraph 609, Page 33)],**

information of a media server and a media renderer and a presently user selecting item, **[When an HTTP server 626 receives a SUBSCRIBE message, it passes it along to a function which parses the message for the necessary information, (Zintel et al., Paragraph 339, Page 20)].**

Regarding claims 9, and 31, wherein at least one of the CPs transmits a roaming message periodically for a certain time less than time recommended by a standard and is constructed to be role-switched again into a CP, **[User Control Point. The set of modules that enable communication with a UPnP Controlled Device. User Control**

Points initiate discovery and communication with Controlled Devices, and receive Events from Controlled Devices, (Zintel et al., Paragraph 61, Page 4)].

Regarding claim 10, the method of claim 1, wherein the synchronization method further includes: turning-on power of a CP to be used by a user after roaming, **[lighting switches 1030 and like home appliances are connected via an A/C power line-based networking 1032 to the PC 1002, wherein the control point is switched on to perform the functions,(Zintel et al., Paragraph 553, Page 30)],**

storing information of a media server and a media renderer by checking a present roaming state through the CP, **[The Rehydrator stores the information that is specific to a particular service instance as private data within the Service object itself. This includes the control URL and information about the control server 232 (such as the HTTP verbs it supports), (Zintel et al., Paragraph 225, Page 13)],**

and judging correspondence of protocols and data formats of the media renderer before/after role-switch and finishing the operation, **[In the UPnP Device Model, all arguments to actions must correspond directly to some state variable, (Zintel et al., Paragraph 265, Page 16)].**

Regarding claim 11, the method of claim 10, wherein the operation is finished when the protocols and the data formats are corresponded, when the protocols and the data formats are not corresponded, the operation is finished after matching corresponding the media server and the media renderer, **[In the UPnP Device Model,**

all arguments to actions must correspond directly to some state variable, (Zintel et al., Paragraph 265, Page 16)].

Regarding claims 6, 13, and 29, wherein at least one of the CPs is constructed to be role-switched into the UPnP device by corresponding to a key input of a user according to roaming, **[When a control point sends a control message, it may choose to include a key. If a control message includes a key, the service checks to see if the key is current, (Zintel et al., Paragraph 757, Page 38)].**

Regarding claim 14, the method of claim 12, wherein at least one of the CPs transmits CP information before role-switch by using an advertisement message of a SSDP (simple service discovery protocol) of the UPnP device, **[Simple Service Discovery Protocol (SSDP). A simple network device discovery protocol. UPnP uses SSDP to allow User Control Points to find Controlled Devices and Services, (Zintel et al., Paragraph 89, Page 6)].**

Regarding claim 15, Zintel et al. teaches a universal plug and play (UPnP) device makes itself known and available for communication with other entities on a network through a set of processes-discovery, description, control, eventing, and presentation, **(Zintel et al., Paragraph 9, Page 2),**

provide information of the media server and the media renderer, **[The functionality of UPnP User Control Points 104-105, Controlled Devices 106-107**

and Bridges 120 can be packaged into physical entities (e.g., multiple function devices 102-103) in any combination, (wherein 102 and 103 provide information, (Zintel et al., Paragraph 128, Page 7)),

provide an item presently selected by the user, [User Control Points initiate discovery and communication with Controlled Devices, and receive Events from Controlled Devices, (Zintel et al., Paragraph 61, Page 4)],

and classify whether a message is an advertisement message of the UPnP device or a roaming message according to role-switch of at least one of the CPs, [Controlling such Services involves a message exchange between a User Control Point 104 and the device 106. This message exchange happens according to a specific Service Control Protocol (SCP) 402, which specifies the content and sequence of the messages exchanged, (Zintel et al., Paragraph 207, Page 12)].

Zintel et al. fails to teach performing a roaming function by including at least two CPs (control point),

Knauerhase et al. teaches a roaming device to facilitate the roaming device's acquiring connectivity, **(Knauerhase et al., Paragraph 1, Page 1)**, to determining and using network coverage maps, and more particularly to wireless devices providing their coverage data to facilitate determining a global coverage map that may be provided, **(Knauerhase et al., Paragraph 1, Page 1),**

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Zintel by performing a roaming function to facilitate the roaming device's acquiring connectivity, **(Knauerhase et al., Paragraph 1, Page 1),** to

determining and using network coverage maps, and more particularly to wireless devices providing their coverage data to facilitate determining a global coverage map that may be provided, (**Knauerhase et al., Paragraph 1, Page 1**).

Regarding claim 16, the method of claim 15, wherein at least one of the CPs transmits a roaming message periodically for a certain time less than time recommended by a standard and is constructed to be role-switched again into a CP, **[User Control Point. The set of modules that enable communication with a UPnP Controlled Device. User Control Points initiate discovery and communication with Controlled Devices, and receive Events from Controlled Devices, (Zintel et al., Paragraph 61, Page 4)]**.

Regarding claims 21, 22 and 32, wherein the at least two CPs and the UPnP device are part of the same UPnP-based network system, **[Fig. 1, Ref # 100, wherein two CPs and a UPnP device are in the same network, (Zintel et al.)]**.

Claims 2 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zintel et al. (US 2002/0029256), in view of Knauerhase et al. (US 2004/0203718), and further in view Saint-Hilaire et al. (US 2004/0233904).

Regarding claims 2 and 25, The modified Zintel et al. teaches a universal plug and play (UPnP) device makes itself known and available for communication with other entities on a network through a set of processes-discovery, description, control, eventing, and presentation, **(Zintel et al., Paragraph 9, Page 2)**,

The modified Zintel et al. fails to teach that the one of the CPs generates an imaginary UPnP device,

Saint-Hilaire et al. teaches wherein at least one of the CPs performs a CP function and a UPnP device function simultaneously by generating an imaginary UPnP device, **[the UPnP mirroring agent M2 may create a UPnP device mirror image 18, (Saint-Hilaire et al., Paragraph 22, Page 22)]**, to emulate a presence of the UPnP device 16 on Network 2, **(Saint-Hilaire et al., Paragraph 22, Page 22)**,

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the modified Zintel by generating an imaginary UPnP device, **[the UPnP mirroring agent M2 may create a UPnP device mirror image 18, (Saint-Hilaire et al., Paragraph 22, Page 22)]**, to emulate a presence of the UPnP device 16 on Network 2, **(Saint-Hilaire et al., Paragraph 22, Page 22)**.

Claims 3-5, and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zintel et al. (US 2002/0029256), in view of Knauerhase et al. (US 2004/0203718), and further in view Choi et al. (US 2002/0040408).

Regarding claims 3 and 26, The modified Zintel et al. teaches a universal plug and play (UPnP) device makes itself known and available for communication with other entities on a network through a set of processes-discovery, description, control, eventing, and presentation, **(Zintel et al., Paragraph 9, Page 2)**,

The modified Zintel et al. fails to teach that the UPnP device is generated by role-switching at least one of the CPs

Choi et al. teaches that the UPnP device is generated by role-switching at least one of the CPs, **a device once operated as the service server and a device once operated as the service client can switch their roles, (Choi et al., Paragraph 53, Page 2)**, to service client and service server, respectively according to the service, **(Choi et al., Paragraph 53, Page 2)**,

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the modified Zintel by role-switching at least one of the CPs, a device once operated as the service server and a device once operated as the service client can switch their roles, **(Choi et al., Paragraph 53, Page 2)**, to service client and service server, respectively according to the service, **(Choi et al., Paragraph 53, Page 2)**.

Regarding claims 4 and 27, wherein information about at least one of the CPs before role-switching is transmitted through an advertisement message of the UPnP device, **[When a device is added to the network, the UPnP discovery protocol allows that device to advertise its services to control points on the network,**

(Zintel et al., Paragraph 609, Page 33)].

Regarding claims 5 and 28, wherein the advertisement message includes roaming state information of the UPnP device, **[a discovery message containing a few, essential specifics about the device or one of its services, e.g., its type, identifier, and a pointer to more detailed information, (Zintel et al., Paragraph 609, Page 33)].**

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zintel et al. (US 2002/0029256), in view of Knauerhase et al. (US 2004/0203718), and further in view Cha et al. (US 6,788,962).

Regarding claim 7, Zintel et al. teaches a universal plug and play (UPnP) device makes itself known and available for communication with other entities on a network through a set of processes-discovery, description, control, eventing, and presentation, **(Zintel et al., Paragraph 9, Page 2),**

The modified Zintel et al. fails to teach the key input includes Korean, English, figures and special characters input function and a voice recognition function,

Cha et al. teaches that the key input includes Korean, English, figures and special characters input function and a voice recognition function, Each numeric key basically includes Korean characters and English alphabet letters for input in Korean or English language, **(Cha et al., Col. 5, Lines 24-26)**, to enhance key functions in a

mobile telecommunication terminal, and in particular, to a method of enhancing functions of a key for diverse purposes, **(Cha et al., Col. 1, Lines 16-20)**,

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the modified Zintel by including key input includes Korean, English, figures and special characters input function and a voice recognition function, Each numeric key basically includes Korean characters and English alphabet letters for input in Korean or English language, **(Cha et al., Col. 5, Lines 24-26)**, to enhance key functions in a mobile telecommunication terminal, and in particular, to a method of enhancing functions of a key for diverse purposes, **(Cha et al., Col. 1, Lines 16-20)**.

Claims 17-20, and 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zintel et al. (US 2002/0029256), in view of Knauerhase et al. (US 2004/0203718), and further in view Saint-Hilaire et al. (US 2004/0233904).

Regarding claim 17, Zintel teaches a synchronization method of a UPnP In a UPnP (universal plug and play)-based home network system including at least two CPs (control point), a media server and a media renderer, **[FIGS. 1 and 2, UPnP is an application-level distributed network architecture where the logical nodes on the network are User Control Points 104-105, Controlled Devices 106-107 and Bridges 120, (Zintel et a., Paragraph 128, Page 7)]**,

and wherein each of the at least two CPs is capable of independently and directly managing and/or adjusting the UPnP device, **[User Control Points are required to synchronize to the state on Controlled Devices and to share state directly among themselves, User Control Points typically have user interface that is used to access one or more Controlled Devices on the network, (Zintel et al., Paragraphs 130 & 131, Page 8)],**

Zintel et al. fails to teach that the one of the CPs generates an imaginary UPnP device,

wherein the imaginary UPnP device is recognizable as a UPnP device in the UPnP-based home network system, **[Fig. 1, Ref # 18, wherein the imaginary UPnP device is recognized as a UPnP device, Saint-Hilaire et al.],**

Saint-Hilaire et al. further teaches wherein at least one of the CPs performs a CP function and a UPnP device function simultaneously by generating an imaginary UPnP device, **[the UPnP mirroring agent M2 may create a UPnP device mirror image 18, (Saint-Hilaire et al., Paragraph 22, Page 22)],** to emulate a presence of the UPnP device 16 on Network 2, **(Saint-Hilaire et al., Paragraph 22, Page 22),**

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Zintel by generating an imaginary UPnP device, **[the UPnP mirroring agent M2 may create a UPnP device mirror image 18, (Saint-Hilaire et al., Paragraph 22, Page 22)],** to emulate a presence of the UPnP device 16 on Network 2, **(Saint-Hilaire et al., Paragraph 22, Page 22).**

Regarding claim 18, the method of claim 17, wherein at least one of the CPs is constructed to be role-switched into the UPnP device by corresponding to a key input of a user according to roaming, **[When a control point sends a control message, it may choose to include a key. If a control message includes a key, the service checks to see if the key is current, (Zintel et al., Paragraph 757, Page 38)].**

Regarding claim 19, the method of claim 12, wherein at least one of the CPs transmits CP information before role-switch by using an advertisement message of a SSDP (simple service discovery protocol) of the UPnP device, **[Simple Service Discovery Protocol (SSDP). A simple network device discovery protocol. UPnP uses SSDP to allow User Control Points to find Controlled Devices and Services, (Zintel et al., Paragraph 89, Page 6)].**

Regarding claim 20, the method of claim 17, wherein one of the CPs classifies whether a message is an advertisement message of the UPnP device or a roaming message according to role-switch of a CP by transmitting information such as a roaming state in Device Description, information of a media server and a media renderer and a presently user selecting item periodically for a certain time less than time recommended by a standard, **[Controlling such Services involves a message exchange between a User Control Point 104 and the device 106. This message exchange happens according to a specific Service Control Protocol (SCP) 402, which specifies the**

content and sequence of the messages exchanged, (Zintel et al., Paragraph 207, Page 12)].

Regarding claim 23, the method of claim 17, wherein the at least two CPs and the UPnP device are part of the same UPnP-based network system, **[Fig. 1, Ref # 100, wherein two CPs and a UPnP device are in the same network, (Zintel et al.)].**

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Shaq Taha** whose telephone number is 571-270-1921. The examiner can normally be reached on 8:30am-5pm Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Jeff Pwu** can be reached on 571-272-6798.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free?).

Art Unit: 2146

Examiner, Art Unit 2146

/Jeffrey Pwu/

Supervisory Patent Examiner, Art Unit 2146